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| 10/782,134 | 02/18/2004 | John Santhoff | 048CIP-120 | 5198 |
| 44279 | 7590 | 08/23/2006 | EXAMINER | |
| PULSE-LINK, INC. 1969 KELLOGG AVENUE CARLSBAD, CA 92008 | | | QURESHI, AFSAR M | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2616 | |

DATE MAILED: 08/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/782,134

Applicant(s)

SANTHOFF ET AL.

Examiner

Afsar M. Qureshi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 1-6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

Response to Amendment

1. This action is responsive to RCE and Amendment /Remarks received on 5/26/2006.

The amended drawings received on 5/26/2006 are accepted by the Examiner and made of record.

Response to Arguments

Applicant's arguments filed on 5/26/2006 have been fully considered but they are not persuasive. No claims were amended and the arguments presented in the REMARKS were already addressed in the Final rejection, mailed 2/6/2006. For example Applicant argued that two communication technologies are completely different and therefore not combinable. As responded in the Final rejection, Examiner still maintains the references of Fullerton and Padovani et al. are analogous art and they are in the same field of endeavor i.e., wireless communications. Examiner also maintains that the combining or modifying the teachings of the prior art to produce the claimed invention can also be found in the knowledge generally available to one of ordinary skill in the art. Based on prior response to the arguments the Examiner contends that the following rejection is still applicable.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 7-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fullerton (US 2003/0189975) in view of Padovani et al. (US 5,535,239).

Fullerton discloses a communication system comprising the following features:
regarding claim 7, an ultra-wideband communication method; regarding claim 16, an ultra wideband communication method;
regarding claim 17, an ultra-wideband communication device. See Abstract.

Fullerton does not disclose the following features: the method comprising the steps of:

regarding claim 7, generating a first data frame, constructed to transmit data at a first data rate; generating a second data frame, constructed to transmit data at a second data rate; and transmitting both the first and second data frames in a pseudo-random method;

regarding claim 8, wherein the pseudo-random method comprises transmitting the first and second data frames so as to substantially avoid generating a spectral line;

regarding claim 9, wherein the pseudo-random method comprises transmitting the first and second data frames by using a pseudo-random timing sequence;

regarding claim 10, wherein the first and second data frames each comprise a plurality of time bins, with each time bin capable of receiving an ultra-wideband pulse;

regarding claim 11, wherein the first data frame transmits data at a rate that ranges between about one kilobit per second to about five megabits per second;

regarding claim 12, wherein the second data frame transmits data at a rate that ranges between about five megabits per second to about one gigabit per second;

regarding claim 13, wherein the second data frame transmits data at a rate selected from a group consisting of: a 25 megabit per second rate, a 50 megabit per second rate, a 100 megabit per second rate, a 200 megabit per second rate, a 400 megabit per second rate, a 480 megabit per second rate, a 500 megabit per second rate, and a one gigabit per second rate;

regarding claim 14, wherein the first and second data frames each comprise a time duration that may range from about one microsecond to about one millisecond;

regarding claim 15, wherein the first and second data frames each comprise a plurality of time bins, with each time bin capable of receiving an ultra-wideband pulse, wherein the ultra wideband pulse may range in duration from about 10 picoseconds to about one nanosecond;

regarding claim 16, the method comprising the steps of: means for generating a first data frame, constructed to transmit data at a first data rate; means for generating a second data frame, constructed to transmit data at a second data rate; and means for transmitting both the first and second data frames in a pseudo-random method;

regarding claim 17, comprising: a transceiver structured to communicate at a first data rate; and a transmitter structured to transmit at a second data rate that is greater than the first data rate;

regarding claim 18, wherein the transceiver communicates by receiving and transmitting at the first data rate, and the transmitter transmits at the second data rate;

regarding claim 19, wherein the first data rate transmits data at a rate that ranges between about 1 kilobit per second to about 5 megabits per second;

regarding claim 20, wherein the second data rate transmits data at a rate that ranges between about 5 megabits per second to about 1 gigabit per second.

Padovani et al. discloses a communication system comprising the following features:

regarding claim 7, generating a first data frame (Figs. 2a-h; Figs. 10a-d), constructed to transmit data at a first data rate (Figs. 10a-d); generating a second data frame (Figs. 2a-h; Figs. 10a-d), constructed to transmit data at a second data rate (Figs. 10a-d); and transmitting both the first and second data frame (Figs. 2a-h; Figs. 10a-d)s in a pseudo-random (Fig. 1, DATA BURST RANDOMIZER LOGIC 46; column 16, lines 50-63; column 34, lines 43-55) method;

regarding claim 8, wherein the pseudo-random (Fig. 1, DATA BURST RANDOMIZER LOGIC 46; column 16, lines 50-63; column 34, lines 43-55) method comprises transmitting the first and second data frame (Figs. 2a-h; Figs. 10a-d)s so as to substantially avoid generating a spectral line;

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regarding claim 9, wherein the pseudo-random (Fig. 1, DATA BURST RANDOMIZER LOGIC 46; column 16, lines 50-63; column 34, lines 43-55) method comprises transmitting the first and second data frame (Figs. 2a-h; Figs. 10a-d)s by using a pseudo-random (Fig. 1, DATA BURST RANDOMIZER LOGIC 46; column 16, lines 50-63; column 34, lines 43-55) timing sequence;

regarding claim 10, wherein the first and second data frame (Figs. 2a-h; Figs. 10a-d)s each comprise a plurality of time bins, with each time bin capable of receiving an ultra-wideband pulse (Fig. 12);

regarding claim 15, wherein the first and second data frame (Figs. 2a-h; Figs. 10a-d)s each comprise a plurality of time bins, with each time bin capable of receiving an ultra wideband pulse (Fig. 12);

regarding claim 16, the method comprising the steps of: means for generating a first data frame (Figs. 2a-h; Figs. 10a-d), constructed to transmit data at a first data rate (Figs. 10a-d); means for generating a second data frame (Figs. 2a-h; Figs. 10a-d), constructed to transmit data at a second data rate (Figs. 10a-d); and means for transmitting both the first and second data frame (Figs. 2a-h; Figs. 10a-d)s in a pseudo-random (Fig. 1, DATA BURST RANDOMIZER LOGIC 46; column 16, lines 50-63; column 34, lines 43-55) method;

regarding claim 17, comprising: a transceiver structured to communicate at a first data rate (Figs. 10 a-d); and a transmitter structured to transmit at a second data rate (Figs. 10a-d) that is greater than the first data rate (Figs. 10a-d);

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regarding claim 18, wherein the transceiver communicates by receiving and transmitting at the first data rate (Figs. 10a-d), and the transmitter transmits at the second data rate (Figs. 10a-d). It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Fullerton by using the features, as taught by Padovani et al, in order to provide an efficient data communication system by reducing within transmission data frames of various users the occurrence of unnecessary instances of contemporaneous transmission of data so as to reduce system wide traffic loading in data transmission. See Padovani et al., column 2, lines 45-48.

Regarding claims 11, 12, 13, 14, 15, 19, 20, Fullerton and Padovani et al. do not disclose the specific data rate and time duration. However, it would have been obvious to one of the ordinary skill in the art to implement any bit locations in a burst as a design choice based upon the arrangement specification and requirement for users.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Afsar M. Qureshi whose telephone number is (571) 272 3178. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad Matar can be reached on (571) 272 7488. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


AFSAR QURESHI
PRIMARY EXAMINER

8/8/2006